

Victorian Mathematics Content Map

This table aligns the lessons provided by Education Perfect to the Victorian Mathematics Curriculum.

Level 10 Victorian Curriculum	
Number and Algebra	
Real Numbers	Education Perfect Lessons
Solve simple problems involving inverse proportion (VCMNA327)	
Money and financial mathematics	
Connect the compound interest formula to repeated applications of simple interest using appropriate digital technologies (VCMNA328)	Compound Interest Basic Formula Compound Interest - Months and Weeks Term Deposit Review: Income and Tax Review: Simple Interest
Patterns and algebra	
Factorise algebraic expressions by taking out a common algebraic factor (VCMNA329)	Identifying Common Factors Factorising with Index Laws Review: Factorising
Simplify algebraic products and quotients using index laws (VCMNA330)	Simplifying Algebraic Products with Index Laws Simplifying Algebraic Quotients with Index Laws Review: Index Laws: Multiplication and Division Review: Index Laws: Stacked Powers and the Zero Index Review: Evaluating Expressions and Using Formulas
Apply the four operations to simple algebraic fractions with numerical denominators (VCMNA331)	Adding Algebraic Fractions Subtracting Algebraic Fractions Multiplying Algebraic Fractions Dividing Algebraic Fractions
Expand binomial products and factorise monic quadratic expressions using a variety of strategies (VCMNA332)	Expanding Binomial Products Factorisation by Grouping Factorising Quadratic Trinomials Factorising Perfect Squares Factorising Differences of Two Squares Factorising by Completing the Square Solving Quadratic Equations by Completing the Square Review: Expanding
Substitute values into formulas to determine an unknown and rearrange formulas to solve for a particular term (VCMNA333)	Using Formulas Rearranging and Solving Equations

Implement algorithms using data structures in a general-purpose programming language (VCMNA334)	
Linear and non-linear relationships	
Solve problems involving linear equations, including those derived from formulas (VCMNA335)	Word Problems Rearranging and Solving Equations Solving Word Problems Review: Linear Equations
Solve linear inequalities and graph their solutions on a number line (VCMNA336)	Introduction to Inequalities Rearranging Inequalities Solving Inequalities Chained Inequalities Review: Linear Graphs
Solve simultaneous linear equations, using algebraic and graphical techniques including using digital technology (VCMNA337)	Using Graphs to Solve Simultaneous Equations Using Substitution to Solve Simultaneous Equations Using Elimination to Solve Simultaneous Equations Review: Finding the Length of a Line Segment Review: Finding the Midpoint of a Line Segment Review: Finding the Gradient of a Line Segment
Solve problems involving gradients of parallel and perpendicular lines (VCMNA338)	Parallel Lines Perpendicular Lines
Explore the connection between algebraic and graphical representations of relations such as simple quadratic, reciprocal, circle and exponential, using digital technology as appropriate (VCMNA339)	Transforming Parabolas - Translation Transforming Parabolas - Dilation and Reflection Transforming Circles Exponential Graphs Review: Non-Linear Graphs
Solve linear equations involving simple algebraic fractions (VCMNA340)	
Solve simple quadratic equations using a range of strategies (VCMNA341)	Factorising Quadratic Expressions Solving Quadratic Equations Using Technology Guess and Check The Quadratic Formula Completing the Square: Method 1 - Using Rearrangement Completing the Square: Method 2 - Using Differences of Two Squares Grouping
Solve equations using systematic guess-check-and-refine with digital technology (VCMNA342)	

Measurement and Geometry	
Using units of measurement	
Solve problems involving surface area and volume for a range of prisms, cylinders and composite solids (VCMMG343)	Surface Area of Prisms Surface Area of Cylinders Surface Area of Complex Solids Volume of Composite Solids Review: Area Review: Area of Circles Review: Area of Composite Shapes Review: Volume
Geometric reasoning	
Formulate proofs involving congruent triangles and angle properties (VCMMG344)	Angle Proofs Parallelogram and Rhombus Proofs Rectangle and Square Proofs Review: Angles and Triangles Review: Angles and Quadrilaterals Review: Congruence Review: Using Congruence to Determine Angles in Triangles
Apply logical reasoning, including the use of congruence and similarity, to proofs and numerical exercises involving plane shapes (VCMMG345)	Scaling and Measurement Polygons and Interior Angles Polygons and Exterior Angles Introduction to Proofs and Logic Showing Congruence Showing Similarity Review: Introduction to Similarity Review: Similarity Tests Review: Similarity and Angles Review: Similarity and Multiple Triangles Review: Introduction to Scaling Review: Magnitude Review: Magnitude as a Ratio Review: Scaling on Cartesian Planes
Pythagoras and trigonometry	
Solve right-angled triangle problems including those involving direction and angles of elevation and depression (VCMMG346)	Angles of Elevation and Depression Introduction to Bearings Using Trigonometry to Solve Problems Involving Bearings Review: Parts of a Right Angled Triangle and Pythagoras' Theorem Review: Basic Trigonometry Review: Inverse Trigonometric Functions

Statistics and Probability	
Chance	
Describe the results of two- and three-step chance experiments, both with and without replacements, assign probabilities to outcomes and determine probabilities of events. Investigate the concept of independence (VCMSP347)	Arrays Probabilities and Three-Step Experiments Building Three-Step Tree Diagrams Tree Diagrams with Unequal Outcomes Probabilities of Unequal Outcomes Three-Step Experiments and Unequal Outcomes Introduction to Independence Investigating Independent Events using Chance Diagrams Review: Tree Diagrams Review: Arrays
Use the language of 'ifthen, 'given', 'of', 'knowing that' to investigate conditional statements and identify common mistakes in interpreting such language (VCMSP348)	Introduction to Conditional Probability Investigating Conditional Probability with Venn Diagrams Investigating Conditional Probability with Two-Way Tables Calculating Conditional Probabilities Using Tree Diagrams Calculating Conditional Probabilities Using Arrays Word Problems Review: Venn Diagrams Review: Two-Way Tables Review: Experimental Probability
Data representation and interpretation	
Determine quartiles and interquartile range and investigate the effect of individual data values, including outliers on the interquartile range (VCMSP349)	Range Quartiles Interquartile Range Five Point Summary Review: Data Sources
Construct and interpret box plots and use them to compare data sets (VCMSP350)	Plotting Box and Whisker Plots Comparing Box and Whisker Plots Review: Measures of Centre and Spread Review: Shape in Data
Compare shapes of box plots to corresponding histograms and dot plots and discuss the distribution of data (VCMSP351)	Box and Whisker Plots, Histograms and Dot Plots Review: Comparing Data Sets Review: Comparing Dot Plots and Histograms
Use scatter plots to investigate and comment on relationships between two numerical variables (VCMSP352)	Introduction to Bivariate Data Scatterplots Analysing Scatterplots

Investigate and describe bivariate numerical data, including where the independent variable is time (VCMSP353)	Introduction to Time Series Analysing Time Series
Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data (VCMSP354)	Evaluating Statistical Graphs: Making Our Graph Evaluating Statistical Graphs: The Shape of the Graph Evaluating Statistical Reports and Claims: Data Collection Evaluating Statistical Reports and Claims: Data Reporting